

focal lens being movable relative to the scan lens to achieve fine focusing but that Engelhardt teaches an objective lens system for a confocal scanning microscope wherein a lens focus (8) is moved relative to a scan lens (11) for fine focusing (Figure 1). The Examiner states that it would have been obvious to combine the teachings of Dixon and Engelhardt at the time that the present invention was made to provide an imaging system with a focus lens movable relative to a scan lens. Applicant states that Engelhardt does not disclose the use of a scan lens. As defined on Page 17 of the present application, and also as described in Claim 1 of the present application, the scan lens has an external entrance pupil. What the Examiner refers to a scan lens 11 in Engelhardt is actually referred to in Engelhardt as an assembly of objectives 11. No scan lens is described or used in Engelhardt. The assembly of objectives 11 have internal entrance pupils.

Also, the varifocal system described in Engelhardt does not have a single lens, but has at least two lenses 8 and both lenses 8 must be moved in order for the microscope described in Engelhardt to work. Engelhardt describes the varifocal optical system 8 as a motorized zoom optical system. In the zoom system described, the two lenses 8 are moved simultaneously. Further, the optical system date described in Engelhardt is always a magnifying system and will not work if used in the present invention in place of the focusing lens. In the Engelhardt patent, the light source 2 and detector 5 must be an identical distance from the zoom lens 8 in order for the microscope described in Engelhardt to work properly.

The present invention can have the light source and detector at different distances from the focusing lens and the system will still operate properly. It is not obvious to combine the teachings of Engelhardt and Dixon to achieve the fine focusing system of the present invention and, even if the teachings of Engelhardt and Dixon are combined, the system will not work to achieve fine focusing. A magnifying optical system, which Engelhardt describes, will not work in the imaging system of the present application.

The Examiner states that the moving of focusing lenses to adjust the focus of a microscope is old and well known in the art. The Examiner relies on Engelhardt as a basis for that statement. Applicant's invention is clearly distinguishable from Dixon and Engelhardt. No one has used a fine focusing lens with a scan lens prior to the Applicant doing so in the present application. There is no motivation from Engelhardt to use the

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varifocal system described in that application with Dixon as there is no teaching that the system will work with a scan lens and, in fact, does not work with a scan lens. Therefore, there is no motivation to combine the varifocal system described in Engelhardt with the teachings of Dixon.

It is therefore respectfully submitted that the Examiner's rejection based on Dixon in view of Engelhardt be withdrawn. While the Applicant has mainly argued with respect to Claim 1, the same argument applies to Claims 2, 3, 4, 5, 8, 14, 16, 19, 21, 23, 24, 26, 27, 39, 41 and 42. As stated previously, the combination of Engelhardt and Dixon does not result in the present invention and further, it is not obvious to combine Engelhardt and Dixon.

The Examiner has rejected Claims 6/4/1, 6/5/1, 8, 15/1...35/3/1 and 40 as being unpatentable over Dixon in view of Engelhardt and further in view of White. The Examiner states that White discloses a multi-photon or two-photon system. However, Dixon and Engelhardt do not disclose a fine focusing lens for use with a scan lens. For the reasons given above with respect to the first group of Claims rejected by the Examiner based on Dixon and Engelhardt, it is respectfully submitted that the Examiner's rejection of the second group of Claims based on Dixon, Engelhardt and White should be withdrawn as well. Further, it is respectfully submitted that it is not obvious to use a liquid-immersion scan lens with the fine focusing lens of the present invention. The present invention has major advantages over the prior art and if it were obvious to use a focusing lens for movement relative to the scan lens, then it is respectfully submitted that that would have been done some time ago. The present invention is structurally and patentably distinct from the combination of the teachings of Engelhardt and Dixon. It is therefore respectfully submitted that the rejection of the second group of claims should also be withdrawn.

The Examiner has provisionally rejected Claims 1 to 3, 7, 8, 13 to 15, 18, 21, 22, 25, 26 and 41 as being unpatentable over Claims 1, 2, 7, 9, 11 to 13, 19, 20 and 22 of co-pending application 10/608,217. It is respectfully submitted that the provisional rejection should be withdrawn. Claim 1 of the present application is directed to a scan lens with a fine focusing feature and Claim 1 of co-pending application 10/608,217 is directed to a liquid immersion scan lens with no mention being made of fine focus. A liquid

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immersion scan lens is a particular type of scan lens and the Claims of the co-pending application do not claim the fine focus feature that is claimed in the present application. The claims of the two applications are therefore patentably distinct. It is further respectfully submitted that in relation to Claims 13, 15, 18, 21, 25 and 26 of the present application and Claims 13, 7, 9, 11, 20 and 19 of the co-pending application, the same distinctions can be made. Since the rejection is a provisional rejection only, the scope of allowable subject matter on one application must be determined before any decision can be made with respect to the Claims of the other application based on double patenting.

It is respectfully submitted that the Claims of the present application are allowable.

Yours very truly,



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